



veracitypipeline

COMPREHENSIVE AND ASSURED PIPELINE INTEGRITY MANAGEMENT

AIE asset
integrity
engineering

IN SAFE HANDS

In a volatile, changing and complex world, where high risk assets are required to meet ever greater demands, a market leading software which harnesses the latest technology and industry knowledge to deliver a complete Pipeline Integrity Management solution.

ve-rac-i-ty

1. habitual observance of truth in speech or statement
 2. conformity to truth or fact
- Synonyms**
1. honesty, integrity, credibility

PIPELINE INTEGRITY MANAGEMENT

Pipeline Integrity Management is the process of managing pipeline risk and mitigating it effectively to ensure pipeline assets are maintained in safe and reliable condition throughout their complete life cycle.

It is considered industry best practice and mandatory in some countries for operators to have a comprehensive Pipeline Integrity Management System in place which is routinely reviewed and updated. Pipeline failures generally result in high consequence events that can have devastating impact on life, reputation, business and the environment.

The management of this threat and the requirement to have a Pipeline Integrity Management System in place is therefore an essential component of any responsible operator.

By understanding the risks that affect the pipeline and then by accordingly managing its Integrity, the likelihood of an unplanned failure or shutdown of the pipeline can be prevented.

Pipeline Integrity Management ensures safe operations and promotes life extension for the asset; it can also help to improve the planning of pipeline maintenance and inspection by identifying key activities in advance to allow the appropriate budgets to be implemented and reduce the amount of spending associated with unplanned activities.

PIPELINE INTEGRITY SPECIALISTS

AIE's integrity and engineering services cover a wide variety of areas relating to oil and gas and heavy industries. Our core service, and what we are considered industry specialists for, relates to Pipeline Integrity Management.

Our comprehensive range of pipeline Integrity services can be employed to deliver a proactive and reactive approach to how pipeline systems are managed. We offer risk-based techniques to prevent failures occurring, and in the event that a failure does occur, we offer a complete emergency preparedness system to help minimise the resulting consequence.

AIE provides our services using experienced personnel that have worked all over the world, gaining valuable experience from each

location and transferring the knowledge and the lessons learned to provide an holistic approach to Pipeline Integrity Management.

Our principal engineers are considered industry experts with extensive experience and qualifications in their relevant fields. We regularly chair or present at educational pipeline conferences and seminars and we have our own Pipeline Integrity Management training course, which is extremely popular with most local and international operators.

Our Pipeline Integrity Management software, Veracity Pipeline, brings our services together under one umbrella and provides a framework for the IM system whilst utilising the latest technology to manage risk, resources and data.

THE OPTIMUM SYSTEM

VERACITY PIPELINE

Veracity Pipeline software provides operators a user friendly and systematic approach to Pipeline Integrity Management. The software geographically presents the pipeline and the risks associated with it whilst securely managing key integrity data and aligning mitigation actions to real time risk values.

Veracity Pipeline forms an integral part of the operators' Pipeline Integrity Management System and its structure and design is fully compliant to industry codes and best practice engineering standards. The software is a multi-platform product and web based, therefore easily accessible from anywhere at any time.

DATA MANAGEMENT

Veracity Pipeline provides a centralised database for all pipeline engineering and integrity records. Users are given pre-determined access rights to allow changes to be tracked, improving security and allowing unlimited parties global access to data on demand.

Data can be linked to multiple documents which are then securely stored against a visual representation of the pipeline, allowing users to easily target areas of concern and efficiently access key information at the click of a button. Data can be stored on client internal servers or using our secure cloud based system which has multiple hosting options.

RISK ASSESSMENT

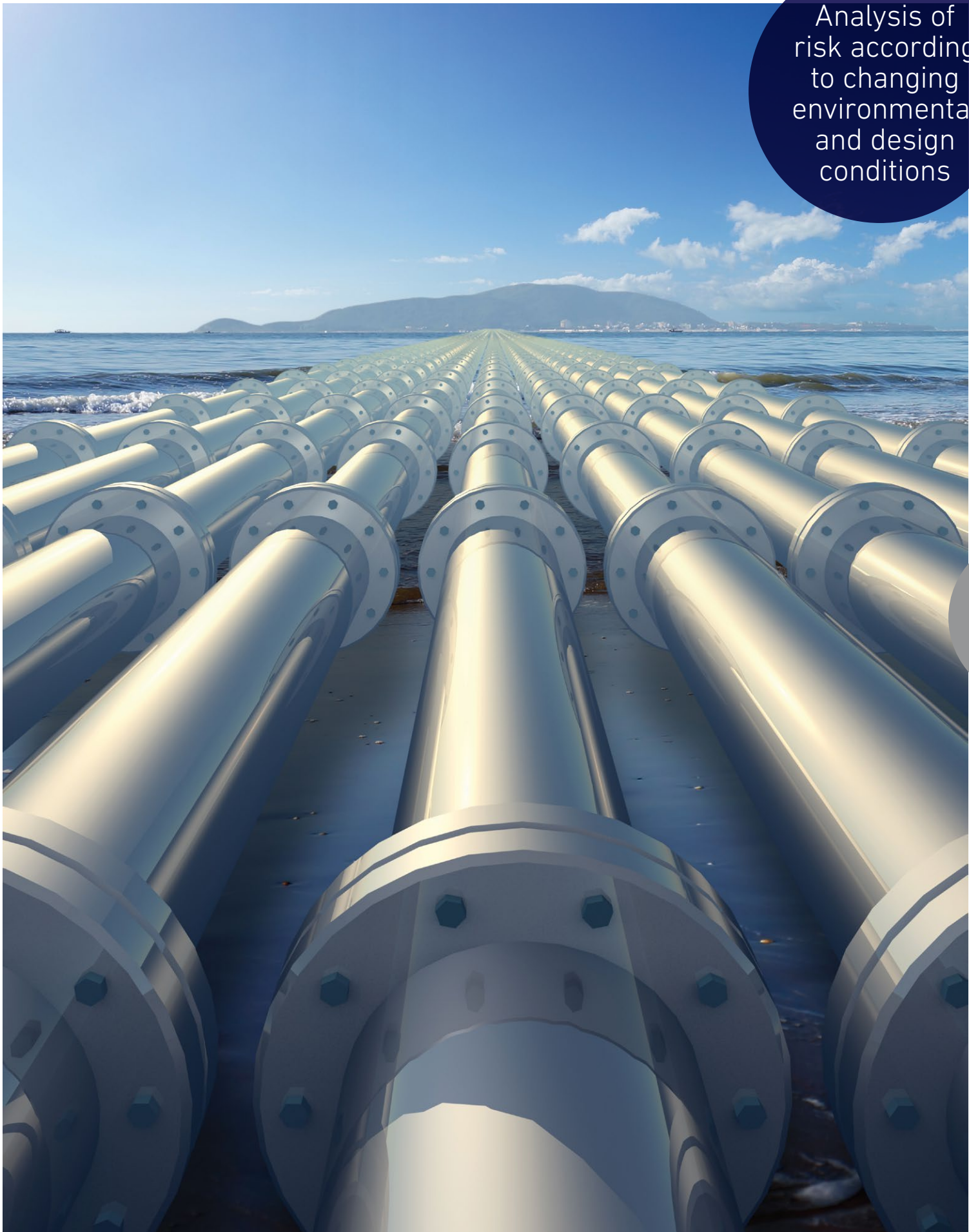
Veracity Pipeline enables operators to comprehensively assess and clearly understand risks affecting their pipeline systems so that educated decisions on budget setting, planning and deployment of resources can be made.

Veracity Pipeline follows a semi-qualitative methodology which promotes group discussion and offers the most comprehensive approach to pipeline risk assessment. The software employs a segmentation philosophy in which the pipeline is sectioned according to different environmental and design conditions. Our threat matrix tool then ensures that each section is appropriately risk assessed and all likely threats are covered. All aspects of the risk assessment process can be easily tailored to company specific risk rules and requirements.

THREAT MITIGATION

Veracity Pipeline software contains our predefined risk matrix tables which identify and connect appropriate integrity and testing requirements to threats that are faced within the pipeline system. The operator can then select from a comprehensive set of risk mitigation actions and a multi-layered and systemic Integrity Management System is created.

Analysis of risk according to changing environmental and design conditions



The software allows users to easily understand and analyse assessment results, data and risk



(Threat Mitigation cont.) Risks are then fed into the risk matrix tables and frequencies of execution according to section specific risk levels are defined. This methodology is proven to optimize inspection and testing requirements and helps to reduce maintenance and inspection costs.

INTEGRITY PLANNING

Veracity Pipeline includes an integrity planning module which can create integrity management plans, and help to manage mitigation activities whilst at the same time bring visibility and traceability to integrity activities. The software clearly presents overdue actions and directs reminder notifications to users when actions become overdue.

If operators choose to alternatively use their existing centralized maintenance management system to drive the integrity management program then the software can be customized to integrate with the asset-specific CMMS.

INTEGRITY ASSESSMENT

Veracity Pipeline provides engineers the platform and data to fully evaluate and understand the condition of the pipeline system. The software can be utilized to trend and compare previous data and integrity performance, allowing a detailed and efficient integrity assessment of the pipeline to be performed.

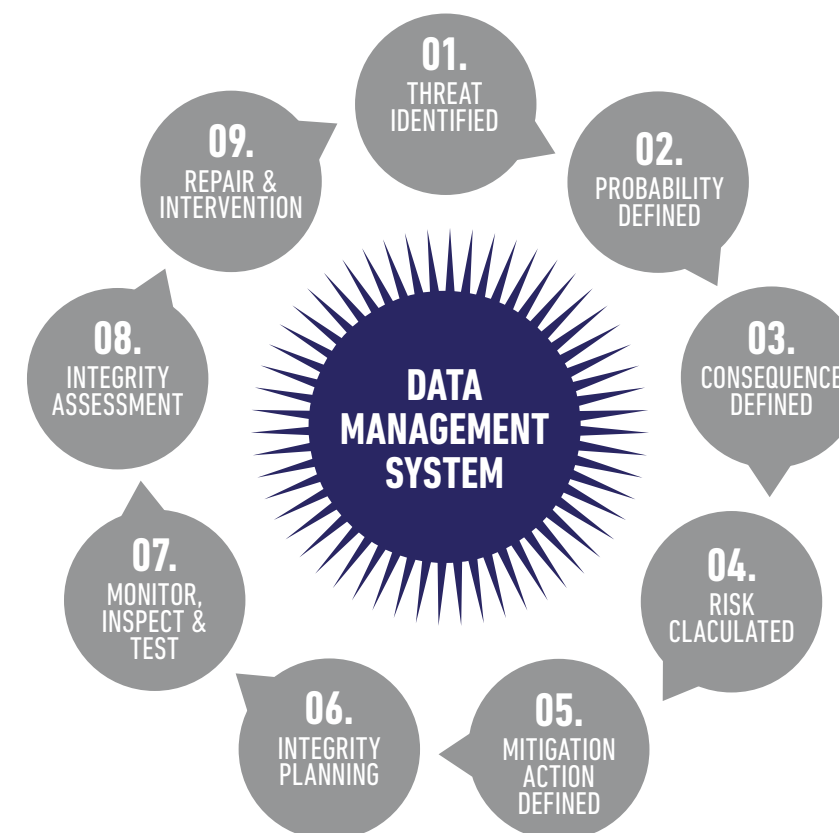
By comprehensively understanding the risk affecting the pipelines safe and continued operation, new or improved mitigation actions or recommendations can be proposed with the software providing documented evidence and information to support the decision making process.

REPORTING

The software includes multiple reporting options which can be run at different levels of detail according to the intended audience. The software can present results against a geographical representation of the pipeline or it can produce detailed reports which include all background analysis and integrity data.

PLAN-DO-CHECK-ACT

Veracity Pipeline follows a 'Plan-Do-Check-Act' methodology which creates control and promotes continuous improvement.



A FLEXIBLE SOLUTION

FLEXIBLE SETUP AND SERVICE OPTIONS
AIE understands that each company and operation is different and that's why we are extremely flexible in the way we provide our software products to clients.

We have multiple options available, from offering a complete Pipeline Integrity Management service using our in-house specialist engineers to setting up the software in our client's facilities with external maintenance and technical support so that it can be internally utilized. Our software can also be fully customized to project, corporate or jurisdiction specific requirements and it can be linked to existing software such as a Centralized Maintenance Management system.

We understand that things can change and that's why all data within our software is fully downloadable into a clear and concise format so that clients can easily transfer to another product or alternative system at a later date, should they so desire.

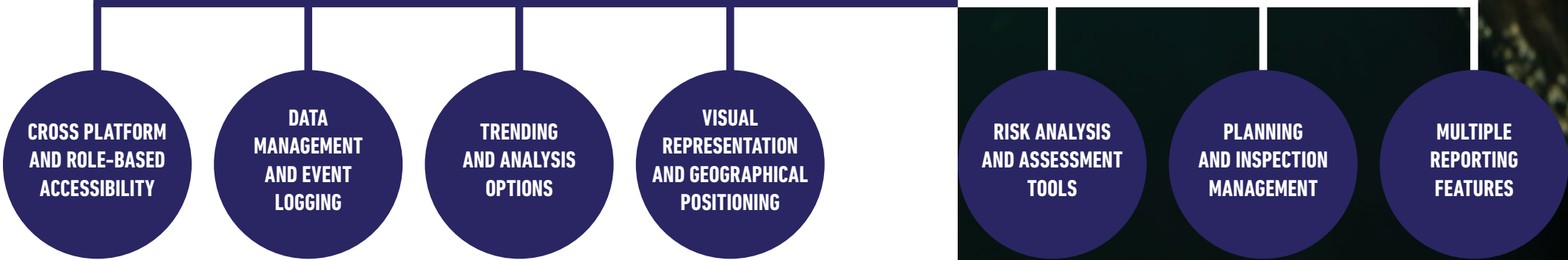
SOFTWARE AND INTEGRITY MANAGEMENT TRAINING
Veracity Pipeline is simple and logical to operate, with most users only taking a matter of hours to understand its design and architecture. AIE also provides in-house training courses to assist with the use of the software and to ensure that users understand its full capability and how it should be setup and maintained for maximum effect.

Our established Pipeline Integrity Management training course is also available to complement the software and reinforce to delegates the background knowledge and engineering methodologies which make up modern risk based Pipeline Integrity Management Systems.

Our software can be used to manage both onshore and offshore pipeline systems



KEY FUNCTIONALITY



WHY VERACITY PIPELINE?

Controlled access rights ensuring accountability and an auditable system

Web based application accessible from any device anywhere at any time

Unified data management system with data linked to geographical positions, threats and risks

Improved risk management and clear, instant visibility of pipeline risk

A risk management tool which aligns mitigation techniques reducing spend on low risk threats and redirect focus onto high risk threats

A flexible system which can be tailored to company or jurisdiction specific requirements and performance standards

A live integrity management and planning system which provides visibility and traceability to inspection and maintenance activities

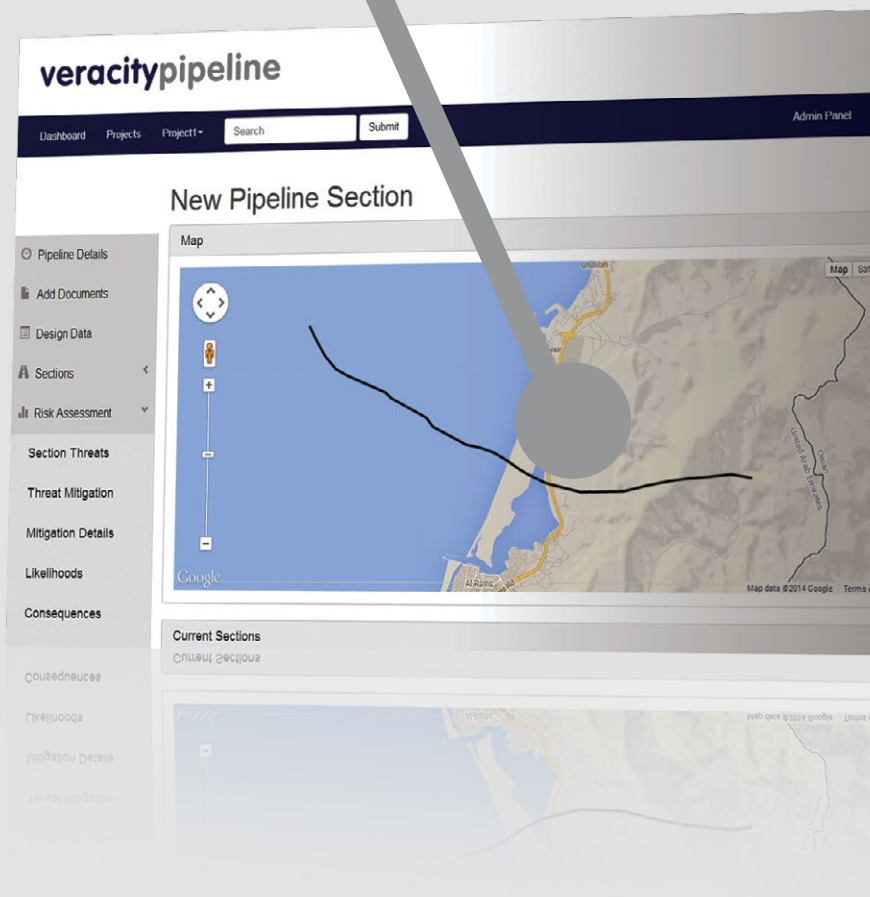
Geographical visualization of pipeline layout and risks with multiple data entry and mapping options

Section specific and efficient risk analysis with predetermined mitigation actions aligned to industry codes and standards

Annual trending of risk providing a vehicle for operators to measure integrity performance

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1 Topsides Piping 2 Riser 3 Sealine (Pipeline) 4 Shore Crossing 5 Onshore Pipeline Prev Next

Threat	Mitigation Technique	Individual Risk			Frequency	Manual Frequency	Justification
		Environment	Cost	Safety			
External Corrosion	Intelligent inline inspection	8	10	2	36	36	
	Visual inspection (subsea)				24	24	
	Potential surveys				24	24	
	Visual inspection				24	24	
Fatigue	External visual inspection	12	15	3	24	24	
Cathodic Overprotection	Potential surveys	4	5	1	48	48	
Third party damage	External visual inspection	12	15	3	24	24	
Overprotection Cathodic	Potential surveys	4	5	1	48	48	
Fatigue	External visual inspection	12	15	3	24	24	
Visual inspection					24	24	

Pipeline Details
 Add Documents
 Design Data
 Sections
 Risk Assessment
 Section Threats
 Threat Mitigation
 Mitigation Details
 Likelihoods
 Consequences
 Mitigation Frequency
 Risks
 Consequences
 Likelihoods
 Mitigation Details
 Threat Mitigation
 Section Threats
 Risk Assessment
 Sections

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Dashboard Projects Project1 Search Submit

Mitigation Details

1 Global2 Launch3 Topsides Piping4 Riser5 Sealine (Pipeline)

Threat	Mitigation Technique	Frequency	Last Inspection Date	Next Inspection Date
Internal Corrosion	Intelligent inline inspection	72	01 March 2009	01 March 2010
	Inspection of uninspected items	48	21 April 2014	21 April 2015
	Continuous corrosion inhibitor injection	6	01 September 2012	01 March 2013
	Biocide injection	6	01 July 2012	01 January 2013
	Maintenance pigs	6	21 April 2014	21 October 2014
	Pig trash analysis	6	01 July 2012	01 January 2013
	SRB sampling	6	01 July 2012	01 January 2013
	Pig trash analysis	6	01 July 2012	01 January 2013
	Maintenance pigs	6	21 April 2014	21 October 2014
	Biocide injection	6	01 July 2012	01 January 2013
Intelligent inline inspection	72	01 September 2015	01 March 2016	
Inspection of uninspected items	48	21 April 2014	21 October 2014	

Pipeline DetailsAdd DocumentsDesign DataSectionsRisk AssessmentSection ThreatsThreat MitigationMitigation DetailsLikelihoodsConsequencesMitigation FrequencyRisksConsequencesLikelihoodsMitigation DetailsThreat MitigationSection ThreatsRisk AssessmentSections



AIE operates from our headquarters in Sharjah, United Arab Emirates.

Our geographically central location situated just 20 minutes from Dubai allows us to promptly serve our core service regions of the Middle East, Africa and Asia.

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